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**PATENT APPLICATION**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Brynley CLARK

Group Art Unit: 3748

Application No.: 10/600,443

Examiner: T. TRIEU

Filed: June 23, 2003

Docket No.: 116223

For: FRANGIBLE COUPLING

**REQUEST FOR RECONSIDERATION**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In reply to the June 27, 2005 Office Action, reconsideration of this application is respectfully requested in light of the following remarks.

Claims 1-11, 13 and 15 are pending in this application.

**I. Allowable Subject Matter**

The indication of allowable subject matter in claims 7-11, 13 and 15 is appreciated, they being allowable if rewritten in independent form to include all of the features of their base claim and any intervening claims. The allowable claims, as well as the remaining pending claims are in condition for allowance for the reasons discussed below.

**II. Claim Rejections Under 35 U.S.C. §102**

Claims 1-6 are rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 3,205,024 to Morley et al. (Morley). The rejection is respectfully traversed.

Morley fails to disclose each and every feature recited in the rejected claims. For example, Morley fails to disclose a frangible coupling for the purpose of supporting a

rotatable load having a first ring, a second ring, a plurality of ligaments and a load magnification member, said first ring and second ring interconnected by said plurality of ligaments with the load magnification member provided on the first ring or rotatable load, there being a small clearance maintained between said member and ligaments adjacent thereto, configured such that, in use, when a load of a predetermined value causes the first and second ring to move relative to one another by a predetermined amount, thereby bringing at least one ligament into contact with said load magnification member, at least one ligament is caused to fail, as recited in claim 1.

Morley relates to bearings useful in gas turbine engines. The bearings are fixed to a structure through a resilient connection to ensure damping of vibrations transmitted to the bearing (col. 1, lines 11-70). As shown in Fig. 1 of Morley, a bearing 13 includes rollers 14 which are in rolling contact with an inner race 12 and an outer race 15. The outer race 15 is bolted to an annular member 16 which has a plurality of holes 17 which receive axially extending resilient bars 20. The bars 20 are disposed at a second end and holes 21 in an annular member 22. The annular member 22, together with a stop ring 23 is bolted to a strut which extends to the casing of a gas turbine engine. The annular member 16 has a flange 25 provided with angularly spaced apart recesses 26 through which the respective bars pass freely (col. 2, lines 30-43).

It is alleged in the Office Action that the bearing of Morley corresponds to the frangible coupling recited in the rejected claims. However, the bearing of Morley has no frangible portion, and therefore may not be interpreted to correspond to the frangible coupling as recited in the rejected claims. It is further alleged in the Office Action that the annular member 16 and the annular member 22 correspond to the first and second rings recited in the rejected claims, respectively. It is contended that the resilient bars 20 correspond to the

plurality of ligaments recited in the claims and that the flange 25 of the annular member 16 corresponds to the load magnification member.

However, as clearly described in Morley, the flange 25 is provided with angularly spaced apart recesses 26 through which the respective bars 20 pass freely (see col. 2, lines 41-43). Accordingly, the flange cannot act as a load magnification member as it is not designed to sever the bars 22. Rather, the bars pass freely through the recesses 26 by the flange 25.

It is further recited in the Office Action that "all functional implication[s] and statement[s] of intended use have been fully considered. However, they are deemed not to impose any structural limitations distinguishable over the Marley[sp] device, which is certainly capable of performing as a frangible coupling if so desired." However, rather than performing as a frangible coupling as alleged in the Office Action, the bearing of Morley and the description of the device actually teaches away from use of such a bearing as a frangible coupling. For example, Morley discloses that because of rotor imbalance or other causes, the shafts 10, 30 are subject to orbiting loads, the resultant vibrations to which the bearings 13, 32 will be subjected will be isolated in the resilient mounting provided by the bars 20, 46. Moreover, by reason of the substantially circular cross-section of these bars, all the bars 20, 46 will carry substantially equal loads whatever may be the direction of the vibrations to which they are subjected (col. 3, lines 37-44). Thus, rather than disclosing a bearing that may be used as a frangible coupling, Morley specifically teaches away from such a frangible device in that it teaches that the bearing including the resilient bars are specifically intended to absorb vibrations to which the bearing is subjected.

Morley further discloses that the stop rings 23, 37 serve to limit resilient radial movement of the outer races and reduce the danger that the bars will break in the event of severe unbalance (col. 3, line 45 - col. 4, line 3). Therefore, rather than act as a frangible

member, as alleged in the Office Action, Morley seeks to prevent the bars 20 from breaking and therefore clearly teaches away from the use of the bearing as a frangible device.

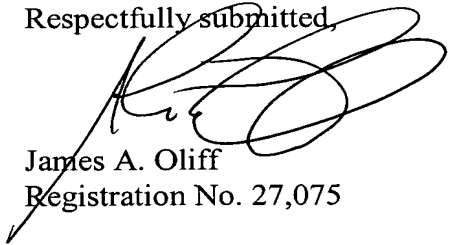
For the foregoing reasons, Morley fails to disclose each and every feature recited in the rejected claims or relate in any way to a frangible member or a device that may be interpreted to be used as a frangible member. Accordingly, withdrawal of the rejection of claims 1-6 under 35 U.S.C. §102(b) is respectfully requested.

### **III. Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Date: September 22, 2005

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